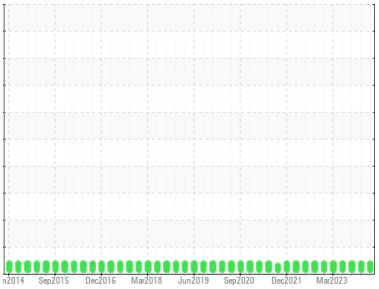
STAUFF FILTRATION TECHNOLOGY

# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## 42 IN FURNACE 40
Component
**Hydraulic System**
Fluid
**AW HYDRAULIC OIL ISO 32 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

**Fluid Condition**
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **ST46355** | ST43713 | ST43881 |
| Sample Date | | Client Info | | **25 Mar 2024** | 20 Dec 2023 | 26 Sep 2023 |
| Machine Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **<1** | 0 | <1 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | **<1** | <1 | 1 |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **2** | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | **<1** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >20 | **3** | 1 | 2 |
| Tin | ppm | ASTM D5185m | >20 | **<1** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **<1** | 0 | <1 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 5 | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | 5 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 5 | **<1** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 25 | **3** | 0 | <1 |
| Calcium | ppm | ASTM D5185m | 200 | **32** | 51 | 50 |
| Phosphorus | ppm | ASTM D5185m | 300 | **123** | 208 | 210 |
| Zinc | ppm | ASTM D5185m | 370 | **71** | 225 | 240 |
| Sulfur | ppm | ASTM D5185m | 2500 | **978** | 629 | 770 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **<1** | 0 | <1 |
| Sodium | ppm | ASTM D5185m | | **2** | <1 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 0 | <1 |
| Water | % | ASTM D6304 | >0.05 | **0.004** | 0.002 | 0.006 |
| ppm Water | ppm | ASTM D6304 | >500 | **46** | 25 | 60.4 |

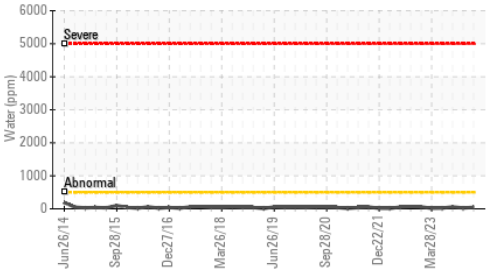
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | **296** | 3690 | 1059 |
| Particles >6µm | | ASTM D7647 | >1300 | **106** | 701 | 197 |
| Particles >14µm | | ASTM D7647 | >160 | **21** | 42 | 16 |
| Particles >21µm | | ASTM D7647 | >40 | **7** | 9 | 5 |
| Particles >38µm | | ASTM D7647 | >10 | **0** | 0 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >20/17/14 | **15/14/12** | 19/17/13 | 17/15/11 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | **0.20** | 0.35 | 0.36 |

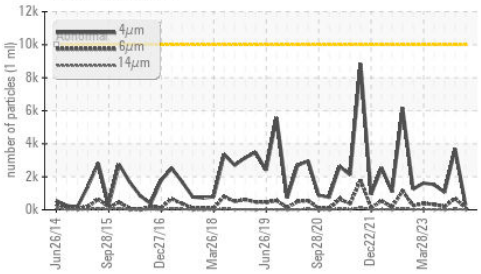
# OIL ANALYSIS REPORT

STAUFF FILTRATION TECHNOLOGY

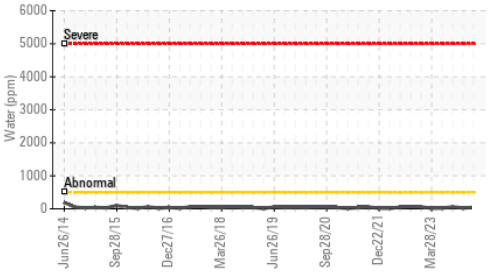
Water (KF)



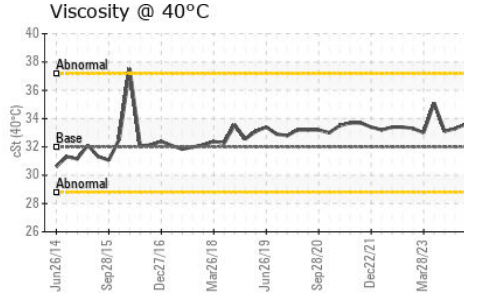

Particle Trend



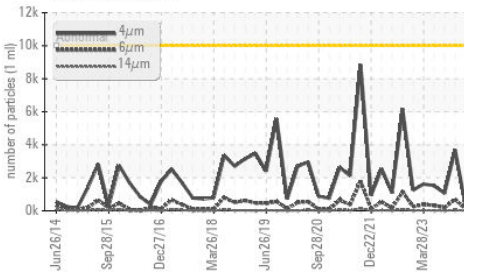

Water (KF)




Viscosity @ 40°C

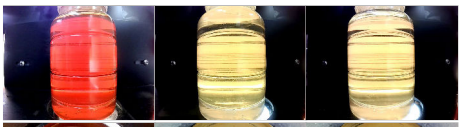



Particle Trend



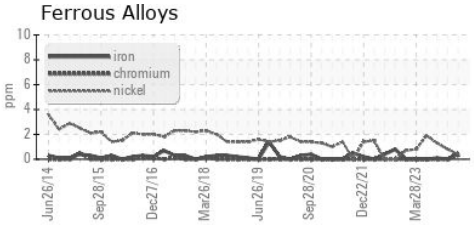

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 32 | **33.6** | 33.3 | 33.1 |

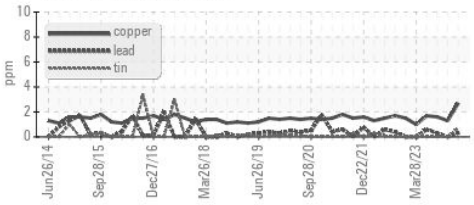
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

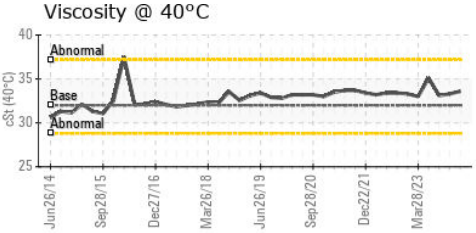
Ferrous Alloys



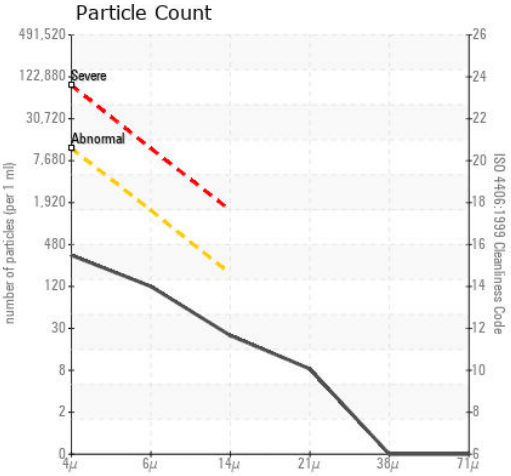

Non-ferrous Metals



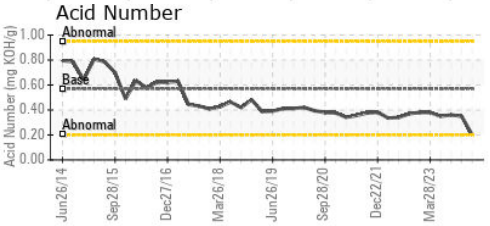

Viscosity @ 40°C




Particle Count




Acid Number




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : ST46355 **Received** : 03 Apr 2024
**Lab Number** : 06138050 **Tested** : 04 Apr 2024
**Unique Number** : 10962858 **Diagnosed** : 05 Apr 2024 - Don Baldridge
**Test Package** : IND 2 ( Additional Tests: KF )

Certificate L2367

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*

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